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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,290	01/05/2001	Jongmin Lee	89190.090700/DP-301278	4652

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EXAMINER

CORRIGAN, JAIME W

ART UNIT PAPER NUMBER

3748

DATE MAILED: 12/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/755,290

Applicant(s)

LEE ET AL.

Examiner

Jaime W Corrigan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-9, 13-16, 18, 24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-6, 13-16, 18, 24 and 25 is/are rejected.
- 7) ☒ Claim(s) 7-9 is/are objected to.
- 8) ☒ Claim(s) 10, 11, 17 and 22 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

This Office Action is in response to the Amendment filed on 25 September 2003. Claims 6-7, 24 are amended. Claims 1-3, 12, 19-21, 23 have been cancelled. Claims 10-11, 17, 22 have been withdrawn. Overall, claims 4-9, 13-16, 18, 24-25 are pending in this application. The arguments with respect to the references applied in the previous Office Action were not deemed persuasive. A final rejection is set forth below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 4-5, 13-16, 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Elendt et al. (PN 5,992,360).

Regarding claims 4, 13 Elendt discloses a deactivation rocker arm assembly (See Figure 1) including an elongate rocker arm (See Figure 1 (1)) having an end (See Figure 1 (5)), an aperture (See Figure 1 (9)) defined by said end, a center post (See Figure 1 (6), (8)) slidingly (See Column 3 Lines 38-53) disposed within said aperture, said center post configured for engaging (See Column 3 Lines 24-37) a valve stem of a valve of an internal combustion engine, said end of said rocker arm defining a first pin bore (See Figures 2- 3 holding (13)) and a second pin bore (See Figures 2- 3 holding (13)), said first pin bore and said second pin bore being substantially concentric (See

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Figures 2-3, (13)) relative to each other, said center post defining a middle pin bore (See Figure 3 (Between (13))); a locking pin assembly (See Figure 1 (16), Figure 3 (13)) selectively coupling (See Column 3 Lines 12-53, Column 4 Lines 1-11) together and decoupling said center post and said rocker arm, said locking pin assembly including an actuating pin (See Figure 3 (13)), a second pin member (See Figure 3 (13)) and a middle pin member (See Figure 3 (Not numbered but clearly visible between (13))), said actuating pin member slidably disposed at least partially within said first pin bore (See Figure 3 (13)), said second pin member slidably disposed at least partially within said second pin bore (See Figure 3 (13)), and said middle pin member slidably disposed at least partially within said middle pin bore (See Figure 3 (Not numbered but clearly visible between (13))); and a free motion spring assembly (See Figure 3 (22)).

Regarding claim 5 Elendt discloses a deactivation rocker arm assembly further comprises a pin spring (See Figures 1, 3 (15)) disposed within said second pin bore, said pin spring normally biasing said locking pin (See Figure 1 (16), Figure 3 (13)) assembly toward a default (See Column 3 Lines 12-53, Column 4 Lines 1-3) position wherein said actuator pin member extends a predetermined distance (See Figure 1 (16), Figure 3 (13)) from disposition within said first pin bore in a direction away (See Figure 1 (16), Figure 3 (13)) from said center post, said middle pin member (See Figure 3 (Not numbered but clearly visible between (13))) extends from disposition within said middle pin bore into (See Figure 3 (Not numbered but clearly visible between (13))) said first pin bore, and said second pin member (See Figure 3 (13)) extends from disposition

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within said second pin bore (See Figure 3 (13)) into said middle pin bore (See Figure 3 (13)) to thereby couple said center post to said rocker arm (See Column 3 Lines 24-53, Column 4 Lines 1-3).

Regarding claim 14 Elendt discloses a pin spring (See Figures 1, 3 (15)) disposed within said second pin bore (See Figures 2- 3 holding (13)), said pin spring normally biasing said locking pin assembly toward a default position (See Figure 3 (13), Column 3 Lines 24-53, Column 4 Lines 1-3) wherein said actuator pin member extends a predetermined distance (See Figure 3 (13), Column 3 Lines 24-53, Column 4 Lines 1-3) from disposition within said first pin bore in a direction away from said center post, said middle pin member (See Figure 3 (Not numbered but clearly visible between (13))) extends from disposition within said middle pin bore into (See Figure 3 (Not numbered but clearly visible between (13))) said first pin bore, and said second pin (See Figure 3 (13)) member extends from disposition within said second pin bore (See Figures 2- 3 holding (13)) into said middle pin bore (See Figure 3 (Between (13)) to thereby couple said center post (See Figure 1 (6), (8)) to said rocker arm (See Figure 1 (1)).

Regarding claim 15 Elendt discloses said rocker arm (See Figure 1 (1)) includes elongate arms (See Figure 1 (1), (5)), said arms being one of attached to and integral with said body of said rocker arm and extending-therefrom (See Figure 1 (1), (5)).

Regarding claim 16 Elendt discloses said arms (See Figure 1 (1), (5)) extend from said end of said rocker arm in a manner that is generally parallel (See Figure 1 (1), (5)) with said rocker arm (See Figure 1 (1)).

Regarding claim 18 Elendt discloses said rocker arm (See Figure 1 (1)) defines a roller orifice (See Figure 3 (Not numbered but clearly visible)), a roller (See Figure 2 (4)) being disposed within said roller orifice and being coupled to said rocker arm, said roller configured for engaging a cam (See Column 2 Lines 1-2, Column 3 Line 1) of the internal combustion engine.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elendt et al. (PN 5,992,360) in view of Kreuter (PN 5,908,015).

Elendt discloses a deactivation rocker arm assembly (See Figure 1) including an elongate rocker arm (See Figure 1 (1)), an aperture (See Figure 1 (9)) defined by said rocker arm, a center post (See Figure 1 (6), (8)) slidably disposed within said aperture, said center post configured for engaging (See Column 3 Lines 24-37) a valve stem (See

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Abstract) of a valve of an internal combustion engine, a locking pin (See Figure 1 (16), Figure 3 (13)) assembly selectively coupling together and decoupling said center post (See Figure 1 (6), (8)) and said rocker arm (See Figure 1 (1)); and a free motion spring (See Figure 3 (21)) assembly.

Elendt fails to disclose spring retainers surrounding the valve stem, the inner spring between a disk cap and inner spring retainer, an outer spring between outer spring retainer and the disk cap.

Kreuter teaches that it is conventional in the art to utilize an inner spring retainer (See Figure 4 (Not numbered but clearly visible and touching (2)) surrounding a portion of the valve stem (See Figure 4 (4)); an outer spring retainer (See Figure 4 (Not numbered but clearly visible and touching (17)) surrounding a portion of the valve stem (See Figure 4 (4)); an inner spring (See Figure 4 (2)) surrounding a portion of the valve stem, said inner spring being disposed between a disk cap (See Figure 4 (Not numbered but clearly visible and touching (2), (4), (17)) associated with the valve stem (See Figure 4 (4)) and said inner spring retainer (See Figure 4 (Not numbered but clearly visible and touching (17)); and an outer spring (See Figure 4 (17)) surrounding said inner spring, said outer spring (See Figure 4 (17)) being disposed between said outer spring retainer (See Figure 4 (Not numbered but clearly visible and touching (17)) and the disk cap (See Figure 4 (Not numbered but clearly visible and touching (2), (4), (17)); one of said inner spring retainer (See Figure 4 (Not numbered but clearly visible

and touching (17)) and said outer spring retainer is coupled to said valve stem (See Figure 4 (4)).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the spring retainer taught by Kreuter in the Elendt device since it would improve valve control.

Response to Arguments

Applicant's arguments filed 25 September 2003 have been fully considered but they are not persuasive.

In response to the Applicant's argument that Elendt fails to disclose an "actuating pin, a second pin member and a middle pin member". It is the Examiner's position that the two coupling means (See Figure 3 (13)) in Elendt and the member between the coupling means can reasonably be interpreted as the same as the Applicant's claimed pin members.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Allowable Subject Matter

Claims 7-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

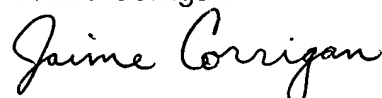
Any inquiry concerning this communication from the examiner should be directed to Examiner Jaime Corrigan whose telephone number is (703) 308-2639. The examiner can normally be reached on Monday - Friday from 8:30 a.m. – 6:00 p.m. 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (703) 308-2623. The fax number for this group is (703) 872-9302. After Final (703) 872-9303.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

JC

Jaime Corrigan

A handwritten signature in black ink that reads "Jaime Corrigan". The signature is written in a cursive, flowing style.

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December 8, 2003

Patent Examiner

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A handwritten signature in black ink, appearing to read 'Th De' with a long horizontal flourish extending to the right.

THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700